

**RULES
OF
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
BUREAU OF ENVIRONMENT
DIVISION OF AIR POLLUTION CONTROL**

**CHAPTER 1200-3-5
VISIBLE EMISSION REGULATIONS**

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1200-3-5-.01 GENERAL STANDARDS.

- (1) No person shall cause, suffer, allow or permit discharge of a visible emission from any air contaminant source with an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period; provided, however, that, for fuel burning installations with fuel burning equipment of input capacity greater than 600 x 10⁶ Btu per hour, no person shall cause, suffer, allow, or permit discharge of a visible emission from any fuel burning installation with an opacity in excess of twenty (20) percent (6-minute average) except for one six-minute period per one (1) hour of not more than forty (40) percent opacity.
- (2) Regardless of the visible emission standard contained in this chapter, all sources identified in Chapter 1200-3-19 of these regulations shall comply with the visible emission standards contained therein.
- (3) Upon mutual agreement of any air contaminant source and the Technical Secretary, an emission limit more restrictive than that otherwise specified in this Chapter may be established. This emission limit shall be stated as a special condition for any permit or order issued concerning the source. Violation of this agreed to, more stringent emission standard shall result in revocation of the issued permit.
- (4) Regardless of the visible emissions standard contained in this chapter, all sources identified in Rule 1200-3-9-.01(4) of these regulations shall comply with the visible emission standards set pursuant to Rule 1200-3-9.
- (5) The visible emission limits set forth in Rule 1200-3-5-.01, shall apply unless a specific visible emission standard is set in a subsequent paragraph of this rule or subsequent rule of this Division 1200-3.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule file January 10, 1977; effective February 9, 1977. Amendment filed February 5, 1979; effective March 21, 1979. Amendment filed May 7, 1979; effective June 21, 1979. Amendment filed October 29, 1981; effective December 14, 1981. Amendment filed June 29, 1984; effective July 29, 1984. Amendment filed September 21, 1988; effective November 6, 1988.

1200-3-5-.02 EXCEPTIONS.

- (1) Consistent with the requirements of Chapter 1200-3-20, due allowance may be made for visible emissions in excess of that permitted in this chapter which are necessary or unavoidable due to routine startup and shutdown conditions. The owner or operator shall maintain a continuous, current log of all excess visible emissions showing the time at which such conditions began and ended and that such record shall be available to the Technical Secretary or his representative upon his request.
- (2) In the event of a dispute between the owner or operator of an air contaminant source and the Tennessee Air Pollution Control Division as to what constitutes due allowance, the Technical Secretary may conduct an Administrative Hearing for the determination of this matter.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed January 10, 1977; effective February 9, 1977. Amendment filed February 5, 1979; effective March 21, 1979. Amendment filed July 21, 1980; effective September 4, 1980. Amendment filed December 20, 1984; effective January 19, 1985. Amendment filed September 21, 1988; effective November 6, 1988.

1200-3-5-.03 METHODS OF EVALUATION AND RECORDING.

- (1) A determination of visible emissions shall be made by a certified evaluator and compliance with the standards contained in rules of this chapter shall be evaluated in terms of opacity.
- (2) Evaluators shall be certified by the criteria approved by the Board.
- (3) Visible emission readings by certified evaluators shall be performed by methods approved by the Board.
- (4) Obscuration of vision due to uncombined water droplets shall not be considered a violation of the standards in this chapter.
- (5) Where the Technical Secretary has agreed in writing, an opacity monitor meeting the criteria contained in rule 1200-3-10-.02 shall determine compliance with the visible emission standards contained in the rules of this chapter. The opacity monitor shall meet the operational availability and quality assurance requirements specified as a permit condition to preclude enforcement action against the source based upon visible conducted by certified evaluators. In each case where this is done, the operating permit of the affected source shall be modified to include this provision and said operating permit shall then be incorporated as a part of the State Implementation Plan.
- (6) On or after July 7, 1992, all new and/or modified sources subject to the provisions of this chapter 1200-3-5 shall utilize six-minute averaging. Roads and parking lots shall utilize two-minute averaging.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rules filed January 10, 1977; effective February 9, 1977. Amendment filed September 21, 1988; effective November 6, 1988. Amendment filed April 23, 1992; effective June 7, 1992.

1200-3-5-.04 EXEMPTION.

- (1) Visible emissions from fuel-burning equipment used exclusively to provide space heating in a building containing not more than two (2) dwelling units shall not be subject to the provisions of this chapter.
- (2) Unless the visible emission standard was set under the authority of 1200-3-5-.01(2), (3), or (4), the visible emission standards of this chapter shall not apply where a source has an applicable visible emissions standard under chapter 1200-3-16.
- (3) If the installation of an in-stack opacity monitor is required by a standard contained in chapter 1200-3-16, then for an identical existing source to obtain the less restrictive opacity standard contained in chapter 1200-3-16 the installation of an in-stack opacity monitor meeting the specifications contained

(Rule 1200-3-5-.04, continued)

in rule 1200-3-10-.02(1)(d)1 shall be required. For situations where the installation of an in-stack opacity monitor would be required to obtain an opacity standard for an existing source equivalent to that set forth for an identical new source subject to chapter 1200-3-16, it is the responsibility of the source owner or operator to notify the Technical Secretary in writing that this revision to the source's existing opacity standard is requested and that the required in-stack opacity monitor will be installed in accordance with rule 1200-3-10-.02.

- (4) The standards in this chapter shall not apply to fog obscurant screens generated for training purposes by the United States military on military bases. Provided that:
 - (a) No hazardous air pollutants, as defined in Paragraph 1200-3-31-.02 (6) of these Regulations, shall be used for the generation of the fog obscurant screens.
 - (b) The fog obscurant screens shall comply with the provisions of Chapter 1200-3-8 and Paragraph 1200-3-9-.03 (3) of these Regulations.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed January 10, 1977; effective February 9, 1977. Amendment filed September 21, 1988; effective November 6, 1988. Amendment filed November 29, 2001; effective February 12, 2002.

1200-3-5-.05 STANDARD FOR CERTAIN EXISTING SOURCES.

- (1) Air contaminant sources meeting the conditions in paragraphs (2) and (3) of this rule and for which a certificate of validation has been issued by the Technical Secretary indicating that to his satisfaction the conditions in paragraph (2) are met, must in lieu of meeting the requirements of rule .01 of this chapter, meet the following emission standards of no visible emissions in excess of forty (40) percent opacity for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any one twenty-four (24) hour period.
- (2) The Technical Secretary must issue a certificate of validation if applied for and the owner or operator of the air contaminant source demonstrates to the satisfaction of the Technical Secretary the following conditions exist:
 - (a) The air contaminant source shall be subject to the rules contained in either Chapter 1200-3-6 or Chapter 1200-3-7 and shall be meeting the appropriate emission standard contained in those chapters.
 - (b) This rule shall not apply to sources regulated under the rules contained in Chapter 1200-3-11, Chapter 1200-3-16, and Chapters 1200-3-25 and Paragraph 1200-3-9-.01(4).
 - (c) The air contaminant source does not include a gas or oil-fired boiler. However, if the particulate emissions of the fuel burning installation are less than that which rule 1200-3-6-.02 would allow for a fuel burning installation of the size Qs where Qs is the heat input rate from solid fuels and/or liquid fuels other than oil, then the previous sentence will not prohibit, in and of itself, the issuance of a certificate of validation.
 - (d) Each emission point, suitable for the installation of a continuously recording opacity monitor of the air contaminant source, whether a process emission source, fuel burning installation, incinerator, or wigwam, having a flow rate of 100,000 ACFM or more shall be equipped with continuously recording opacity monitors of the reference method type as outlined in the Federal Register, Vol. 48, No. 62, March 30, 1983, beginning on page 13327, or an equivalent or alternate type approved by the Technical Secretary. However, a monitor will not have to be installed on those emission points of the air contaminant source for which the owner or operator does not wish to be allowed to emit more than twenty percent opacity. In this event these points must be clearly specified on any application for a certificate of validation. The Technical

(Rule 1200-3-5-.05, continued)

Secretary may still require these other points to install such a monitoring system. This provision shall not apply to gas streams containing moisture which interferes with proper instrument operation.

- (e) The air contaminant source meets all emission standards in these regulations outside this chapter. Demonstration of this will require, as a minimum, an acceptable stack test report for particulate matter. This test must be conducted in the presence of personnel from the Division of Air Pollution Control.
 - (f) The PM₁₀ ambient air quality standards are being met in the vicinity of the air contaminant source. The Technical Secretary may require this to be demonstrated.
 - (g) A certificate of validation has never been revoked for this air contaminant source.
 - (h) A fee of five hundred dollars (\$500.00) has been paid to the Department to cover the costs of review of the request for the certificate of validation.
- (3) The owner or operator of the air contaminant source must:
- (a) post on the operating premises the certificate of validation;
 - (b) maintain for at least one year the readout from the opacity monitor(s) and keep this record available for inspection by the personnel of the Division of Air Pollution Control;
 - (c) keep the air pollution control equipment and the opacity monitor in good operating condition and utilize said equipment at all times.
- (4) After Administrative Hearing the certificate of validation will be revoked by the Technical Secretary if he finds any of the requirements of paragraph (2) have been violated and/or if the requirements of paragraph (3) have been frequently and flagrantly violated after its issuance.
- (5) Upon the granting of a construction permit for the modification of an air contaminant source for which a certificate of validation has been issued, the certificate of validation shall become void.
- (6) Air contaminant sources required to conduct in-stack opacity monitoring as per subparagraph (2)(d) above may elect to have visible emissions determined by Method 9 outlined in the Federal Register, Vol. 39, No. 219, November 12, 1974, beginning on page 39874. For a source electing to have visible emissions determined by this method, the applicable visible emission standard under the certificate of validation shall be as follows: No visible emissions in excess of forty (40) percent opacity for more than one-six (6) minute period in any one (1) hour or more than twenty-four (24) minutes in any one twenty-four (24) hour period. For an affected source the choice of methods of the determination of visible emissions must be made with the application for the certificate of validation, otherwise the standard set forth in paragraph (1) of rule 1200-3-5-.05 shall apply.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed January 10, 1977; effective February 9, 1977. Amendment filed September 21, 1988; effective November 6, 1988. Amendment filed April 18, 1990; effective June 2, 1990. Amendment filed May 17, 1990; effective July 1, 1990.

1200-3-5-.06 WOOD-FIRED FUEL BURNING EQUIPMENT.

- (1) Wood-fired fuel burning equipment, which commenced operation before March 1, 1978, with a heat input of 100 million Btu/hr or greater must meet an emission limit of forty (40) percent opacity except for four six (6) minute periods per day not to exceed one six (6) minute period per hour.
- (2) Wood-fired fuel burning equipment, subject to Rule 1200-3-6-.05(1), (a), (c), (d), (e), or (2) must meet an emission limit of twenty (20) percent opacity except for one six (6) minute period per hour.
- (3) Wood-fired fuel burning equipment subject to Rule 1200-3-6-.05(8)(d) must meet an emission limit of forty (40) percent opacity except for one six (6) minute period per hour.
- (4) Opacity for purposes of this rule shall be determined by the reference method as specified in the Federal Register, Vol. 39, No. 219, November 12, 1974.
- (5) Other emission sources constructed on or after June 16, 1978, that exhaust through the same stack as wood-fired fuel burning equipment subject to Rule 1200-3-5-.06 shall meet an opacity standard where V is:

$$V = \frac{40.0 V_W + (X) V_R}{V_W + V_R}$$

Where,

- V = opacity standard in percent opacity, six (6) minute average.
- X = opacity standard in percent opacity that applies to other sources or sources discharging through same stack.
- V_W = exhaust flow rate in dry standard cubic feet per minute from the wood-fired fuel burning equipment and other equipment present before June 16, 1978.
- V_R = exhaust flow rate in dry standard cubic feet per minute from the equipment (not being wood-fired fuel burning equipment) constructed so as to exhaust through the stack and commenced on or after June 16, 1978.

- (6) This rule does not apply in Davidson, Hamilton, Knox, and Shelby Counties but facilities in these counties will be subject to Rule 1200-3-5-.01.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed May 17, 1978; effective June 16, 1978. Amendment filed December 20, 1984; effective January 19, 1985. Amendment filed September 21, 1988; effective November 6, 1988.

1200-3-5-.07 REPEALED.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. Seq. **Administrative History:** Original rule filed February 5, 1979; effective March 21, 1979. Repeal filed June 29, 1984; effective July 29, 1984.

1200-3-5-.08 TITANIUM DIOXIDE (TiO₂) MANUFACTURING.

- (1) Visible emissions from the spray dryers used for pigment drying in the chloride process for the manufacture of (TiO₂) shall meet an emission limit of 80 percent opacity provided that these sources comply with the applicable particulate matter emission limits set forth in Chapter 1200-3-7.
- (2) Opacity for the purposes of this rule shall be determined by the reference method specified in the Federal Register, Volume 39, No. 219, November 12, 1974.

(Rule 1200-3-5-.08, continued)

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed February 5, 1979; effective March 21, 1979. Amendment filed May 7, 1979; effective June 21, 1979. Amendment filed August 2, 1999; October 16, 1999.

1200-3-5-.09 KRAFT MILL AND SODA MILL RECOVERY FURNACES.

- (1) Visible emissions from kraft mill and soda mill recovery furnaces under construction or in operation prior to September 24, 1976, shall not exhibit 35 percent opacity or greater.
- (2) Opacity for the purposes of this rule shall be determined by Reference Method 9 specified in the Federal Register, Vol. 39, No. 219, November 12, 1974, beginning on page 39874.
- (3) In order for a source subject to this rule (1200-3-5-.09) to obtain the applicable opacity de minimis level specified in Paragraph 1200-3-20-.06(5), the monitoring of opacity emissions as described in Rule 1200-3-10-.02 shall be conducted.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed December 18, 1981; effective February 1, 1982. Amendment filed September 21, 1988; effective November 6, 1988. Amendment filed January 21, 1998; effective April 6, 1998.

1200-3-5-.10 CHOICE OF VISIBLE EMISSION STANDARDS FOR CERTAIN FUEL BURNING EQUIPMENT.

- (1) A fuel burning installation having fuel burning equipment with a heat input of between 50 million Btu/hr and 600 million Btu/hr, in operation or having a construction authorization, on July 31, 1981 and subject to rule 1200-3-5-.01 shall have the option of electing an alternate visible emission standard contained in paragraph 1200-3-5-.10(2). The owner or operator of such fuel burning equipment electing to be regulated by the alternate standard shall make this election known in writing, by certified mail, to the Technical Secretary within 90 days of the effective date of this rule.
 - (a) The election of the alternate standard will apply to all fuel burning equipment at the fuel burning installation.
 - (b) If the alternate standard is not elected, all fuel burning equipment at the fuel burning installation will remain subject to Rule 1200-3-5-.01.
- (2) No person electing the alternate visible emission standard shall cause, suffer, allow, or permit the discharge of a visible emission from any fuel burning equipment in excess of twenty (20) percent opacity (6 minute average) except for one six minute period per one (1) hour or more than twenty-four (24) minutes in any twenty-four (24) hour period.
- (3) Opacity for the purpose of Paragraph 1200-3-5-.10(2) shall be determined by the reference method as specified in the Federal Register, Vol. 39, No. 219, November 12, 1974.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed June 16, 1981; effective July 31, 1981.

1200-3-5-.11 REPEALED.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed November 12, 1982; effective December 13, 1982. Amendment filed January 21, 1998; effective April 6, 1998.

1200-3-5-.12 COKE BATTERY UNDERFIRE (COMBUSTION) STACKS.

- (1) In the event emissions from a coke battery underfire stack are determined to be in violation of the opacity limitations contained in other rules of this chapter, the owner or operator may elect within thirty (30) days after notification of violation to conduct particulate emissions testing in accordance with the provisions of this chapter to demonstrate compliance with the applicable particulate mass emission limitation within 45 days after such election. In the event that such testing demonstrates compliance with the mass emission limitation and visible emissions are in excess of the opacity limitation during such testing, the opacity observed during such testing shall become the alternate opacity limitation for that emission point.
- (2) The following methods shall be used to determine an alternate opacity limitation:
 - (a) Opacity readings shall be recorded at 15-second intervals. Each observation period shall begin with the start of each stack test run meeting the applicable mass emissions limitation and shall end with the completion of the stack test run or sixty minutes later, whichever shall occur first. Opacity observations made during any stack test run which fails to demonstrate compliance with the applicable mass emissions limitation shall not be used in determining the alternate opacity limitation.
 - (b) The highest average of sixty minutes or less (the highest average of the first 240 consecutive 15-second opacity observations during each stack test run meeting the applicable mass emissions limitation) shall be determined. If a stack test run is less than one hour, the average of the 15-second opacity observations made during the stack test run shall constitute the average sixty minutes or less for that stack test run.
 - (c) The highest rolling six-minute average (the highest average of any 24 consecutive 15-second opacity observations during a stack test run meeting the applicable mass emissions limitation) shall be determined.
 - (d) The alternate opacity limitation shall consist of the highest average of sixty minutes or less and the highest rolling six-minute average plus seven percent (opacity).
- (3) An alternate opacity limitation determined pursuant to this rule shall be imposed as a condition on any permit issued for the affected source.
- (4) In the event there has been a previous violation of an opacity limitation contained in other rules of this chapter and, if the opacity level of the previous violation did not exceed the alternate opacity limitation established pursuant to this rule, the owner or operator shall not be subject to criminal or civil sanctions for the previous violation.

Authority: T.C.A. §§68-25-105 and 4-5-201 et. seq. **Administrative History:** Original rule filed September 21, 1988; effective November 6, 1988.